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XXV. *Account of the Marmots of North America hitherto known, with Notices and Descriptions of three new Species.*  
*By Joseph Sabine, Esq. F R.S. &c.*

*Read January 15, 1822.*

IN a collection of Natural History, received in England at the end of the year 1820 from Captain John Franklin, of the Royal Navy, the Commander of the Expedition sent over land to ascertain the position of the mouth of the Copper Mine River, and to explore and examine the Northern Coasts of the American Continent, were specimens of three new species of the genus *Arctomys* or Marmot.

The whole collection had been made by Dr. John Richardson and Lieutenant Robert Hood (who accompanied the Expedition), partly in the neighbourhood of Cumberland House, where the party passed the winter of 1819-20, having left York Fort on Hudson's Bay in the preceding autumn, and partly in an excursion made to Carlton House in the succeeding month of May. Cumberland House is a principal station in the interior of the country belonging to the Hudson's Bay Company, about 450 miles in a direct line south-west of York Fort; and Carlton House, also a station of the Company, lies nearly south of the former, being about 150 miles distant from it. Soon after the collection was received, it was placed in my hands by the direction of the Right Honourable the Earl Bathurst, the Secretary of State, with a request that I would prepare a scientific description



tion of the different specimens, and communicate the same to the Linnean Society. After the descriptions and account should be completed, the specimens were directed to be placed in the British Museum.

Quadrupeds and Birds form the chief part of the collection. Of the former, there are specimens of twelve different animals, most of them in a very perfect state, and affording excellent illustrations of that department of the zoology of the arctic countries of the New Continent. Of the Birds, there are specimens of above forty species, well preserved; nearly every one of them will supply some novel information to the ornithologist; a few are particularly interesting, from being hitherto unknown, or very imperfectly described.

The examination of the three undescribed Marmots led me into an investigation of the other species of the genus, hitherto known as natives of North America; and as I found that the published descriptions of them were in some instances obscure, and in others incorrect, I was induced to draw up this communication, conceiving that a more accurate account of the whole, as far as the means I possessed enabled me to prepare it, might not only be generally useful, but serve also to illustrate my descriptions of the new species.

The Marmots were placed by Linnæus in his genus *Mus*; they were separated by Schreber, who took the specific name *Arctomys*, given by Pallas to the Bobac Marmot, as that of his new genus; which being adopted by Gmelin in his edition of the *Systema Naturæ*, has continued to be used by succeeding naturalists. The whole generic character is given by Illiger\*; but to prevent the necessity of repetition in my descriptions, I will here enumerate the principal points in which all the species agree.

\* Illiger *Prod. Syst. Mam. et Av.* xxxvii. p. 84.



The *mouth* small, and placed below; the *fore-teeth* long, narrow, and wedge-shaped, two in each jaw; the *grinders* five in the upper and four in the lower jaw, on each side; the *whiskers* on the cheeks and *long hairs* over the eyes directed backwards: the *nose* short, more or less blunt, and when described as sharp, only so comparatively; the *ears* short and small, sometimes so short that only the foramen appears, and then the animal so circumstanced has been described as without ears; the *body* long; the *tail* short and covered with hair; the *legs* short; the *fore-feet* with four, but in some species with five, and the *hind-feet* always with five toes; the *claws* more or less bent. The habits of all are supposed to be similar: they feed on roots, fruits and seeds, burrow in the earth, or live in holes of trees and rocks, and are probably all torpid in the winter; innocuous when wild, and gentle in confinement.

Several species of *Arctomys* have been described as inhabiting various parts of the globe besides that portion to which the present account is confined; the best known of these are *A. Marmota* (the Marmot of the Alps), *A. Bobac*, and *A. Citillus*. Four species have been enumerated by authors as natives of North America: of these *A. Monax*, though at first involved in difficulty, is now well known; *A. Empetra* is also free from all doubt; *A. pruinosa* is but imperfectly known; and *A. Hudsonius*, though described as a Marmot, belongs to another genus.

Of the three new species now to be recorded, I possess little information respecting the habits or manners. My notice of them therefore will be confined to the description of the specimens which the annexed figures will illustrate.



## ARCTOMYS MONAX. MARYLAND MARMOT.

1. A. capite auriculato, rostro acuto, cauda elongata, corpore griseo, pedibus nigris.

Bahama Coney. *Catesb. Carol.* ii. 79.

Marmota Americana. *Catesb. Carol. App.* 28.

The Monax or Marmotte of America. *Edw. Nat. Hist.* ii. 104.

Cavia Bahamensis. *Klein. Quad.* 50.

Glis Marmota Americanus. *Klein. Quad.* 56.

Glis fuscus. Marmota Bahamensis. *Bris. Reg. Anim. edit. 4to.* 163.—*edit. 8vo.* 115.

Glis fuscus rostro e cæruleo cærulescente. Marmota Americana. *Bris. Reg. Anim. edit. 4to.* 164.—*edit. 8vo.* 115.

Mus Monax. *Linn. Syst. Nat. edit. 10.* 1. 60.—*edit. 12.* 1. 81. *Pallas Glir.* 74. *Schreb. Quad.* 737. *pl.* 208.

Maryland Marmot. *Penn. Syn. Quad.* 270. *Penn. Hist. Quad.* ii. 398.—*edit. 3.* 2. 130. *Penn. Arct. Zool.* i. 111. *Shaw's Zool.* iii. 117.

Le Monax ou Marmotte de Canada. *Buff. Hist. Nat.* xiii. 136. *Supp.* iii. 175. *pl.* 28. *Hist. Nat. par Sonnini* xxxii. 222. *Desmarest in Nouv. Dict. d'Hist. Nat.* xix. 134.

Glis Monax. *Erxl. Syst. Anim.* 361.

Arctomys Monax. *Gmel. Syst. Nat.* i. 142. *Turton Syst. Nat.* i. 89.

Monax. *Bewick's Quad. edit. 1.* 345. *cum figura.*—*edit. 2.* 368. *cum figura.*

Size of a Rabbit. Face light blueish ash-colour; nose rather sharp; eyes dark, slightly prominent; ears small and round; whiskers long and stiff, growing from the corners of the mouth. Body dark brown, paler underneath; tail half the length



length of the body, rather bushy, with dark brown hairs. Feet and claws black ; the latter long and sharp.

The description is formed from the characters and figures given by the different authors referred to ; I have not been able to obtain a specimen from which to correct it.

The animal inhabits the more temperate parts of North America, Pennsylvania, Maryland and Virginia ; and is also found in the Bahama Islands. It feeds on roots, fruits and vegetables. Lives under ground or in holes of trees, and is said to sleep during the winter season.

Catesby in 1743 described and figured this species as an inhabitant of the Bahamas ; his figure has much resemblance to a large Rat, and is certainly very unlike what the animal is represented really to be by subsequent authors. In the Appendix to his work it is again mentioned among the Quadrupeds of North America as a different animal. This mistake led Klein and Brisson to make two species, founded on the two accounts of Catesby. Erxleben united their references, and thus corrected their error.

Edwards in 1747, without a knowledge of Catesby's account, described the animal from a living specimen belonging to Sir Hans Sloane, and published a good figure of it, supposing it to have been previously unknown ; the colour of the body of this figure is probably too light. Linnæus formed his character of the species from Edwards, and did not refer to any other work in the 10th edition of his *Systema Naturæ* ; in the 12th edition he only added to his former account a description of the animal received from his pupil Alstrœmer.

Pennant in his *Synopsis of Quadrupeds* (the first edition of the work which he subsequently called a *History of Quadrupeds*), named the animal the Maryland Marmot, the one described and



figured by Edwards having been brought from that province to Sir Hans Sloane. Pennant referred to and adopted the accounts of Catesby as well as of Edwards.

Buffon at first confounded the Monax with the Marmot of the Alps. In the Supplement to his *Histoire Naturelle* he corrected this mistake, but still treated it only as a variety of that species. In his account of it in both instances he got into error, supposing it to be the Siffleur of Canada, which is the next species. Buffon's figure is said to be from a drawing sent him by Collinson; but it has so strong a resemblance to Edwards's figure, that it might be supposed to have been designed from that engraving, though the colour has more accordance with the figure of Catesby.

Schreber's figure is copied from that of Buffon; but in the colouring he has followed Edwards. Bewick's figure is copied from Edwards.

#### ARCTOMYS EMPETRA. QUEBEC MARMOT.

2. A. capite auriculato, rostro obtuso, cauda mediocri, corpore suprà vario, subtùs castaneo.

Quebec Marmot. *Penn. Syn. Quad.* 270. *pl.* 24. *fig.* 2. *Forster in Phil. Trans.* vol. lxii. 378. *Phil. Trans. Abr.* xiii. 329. *Penn. Hist. Quad.* ii. 397. *pl.* 41. 2.—*edit.* 3. ii. 129. *pl.* 74. 1. *Penn. Arct. Zool.* i. 111. *Bewick's Quad.* *edit.* 1. 346. *cum figura.*—*edit.* 2. 369. *cum figura.* *Shaw's Zool.* iii. 119.

*Glis Canadensis.* *Erxl. Syst. Reg. Anim.* 363.

*Mus Empetra.* *Pallas Glir.* 75.

*Arctomys Empetra.* *Schreb. Quad.* 743. *pl.* 210. *Gmel. Syst. Nat.* i. 143. *Turton Syst. Nat.* 1. 89.

Marmotte de Quebec. *Desmarest in Nouv. Dict. d'Hist. Nat.* xix. 314.

Length



Length from the nose to the insertion of the tail twenty inches. Nose blunt and dark; hair on the cheeks and chin short, inclining to grey, on the top of the head dark brown; ears short, round, rather bare, appearing above the hair of the head; cheeks not much puffed; the whiskers as well as the long hairs growing over the eyes stiff and black; upper fore-teeth long and round, the lower longer and smaller. The whole upper part of the body nearly alike, the hairs being dark at their base, yellowish in the middle, and black at the top, with the tips white, but there is less appearance of the white towards the tail; throat, legs, and all the under-parts dark chesnut; tail six inches long, hair throughout dusky, without white tips, longer than on the back, darker at the end. Toes black, covered with short dark hairs; the inner ones on the hind-feet and the outer ones on the fore-feet shorter: rudiment of a fifth toe inside of the fore-feet; claws long and sharp, those on the fore-feet longest and more arched.

This description is from a specimen presented by the Hudson's Bay Company to the British Museum.

The animal was first described in 1771 by Mr. Pennant in his *Synopsis of Quadrupeds* from a living specimen; and subsequently in 1772, in the *Philosophical Transactions*, by Mr. John Reinhold Forster, from a specimen sent, with several other subjects of natural history, from Hudson's Bay by Mr. Graham, and deposited in the Museum of the Royal Society; but that specimen was only eleven inches, and the tail three inches long; it could not therefore have been fully grown. Pallas described the animal from a specimen in the Leyden Museum, and gave it the name of *Empetra*; this did not exceed a foot in length, and its tail was only two inches and a half long. It is the animal which  
the



the French Canadians are said to have called Siffleur, from the hissing noise it makes when disturbed, though Buffon supposed that name more applicable to the Maryland Marmot. It inhabits the country round Hudson's Bay, Canada, and other northern parts of America.

The figure given by Pennant in his *Synopsis of Quadrupeds*, and also in the second and third editions of his *History of Quadrupeds*, is small, and, though a tolerable representation, does not convey a good idea of the animal. This figure was copied by Bewick.

Schreber's figure was taken from a drawing communicated to him by Pallas; he makes the body a pale yellow, and the top of the head as well as the under-parts of the body chesnut; the tail is represented so short as not to touch the ground as the animal stands. The chesnut colour of the head is mentioned by Forster, and therefore is probably to be found in some instances, though on the specimen I have seen there is no such appearance.

#### ARCTOMYS PRUINOSA. HOARY MARMOT.

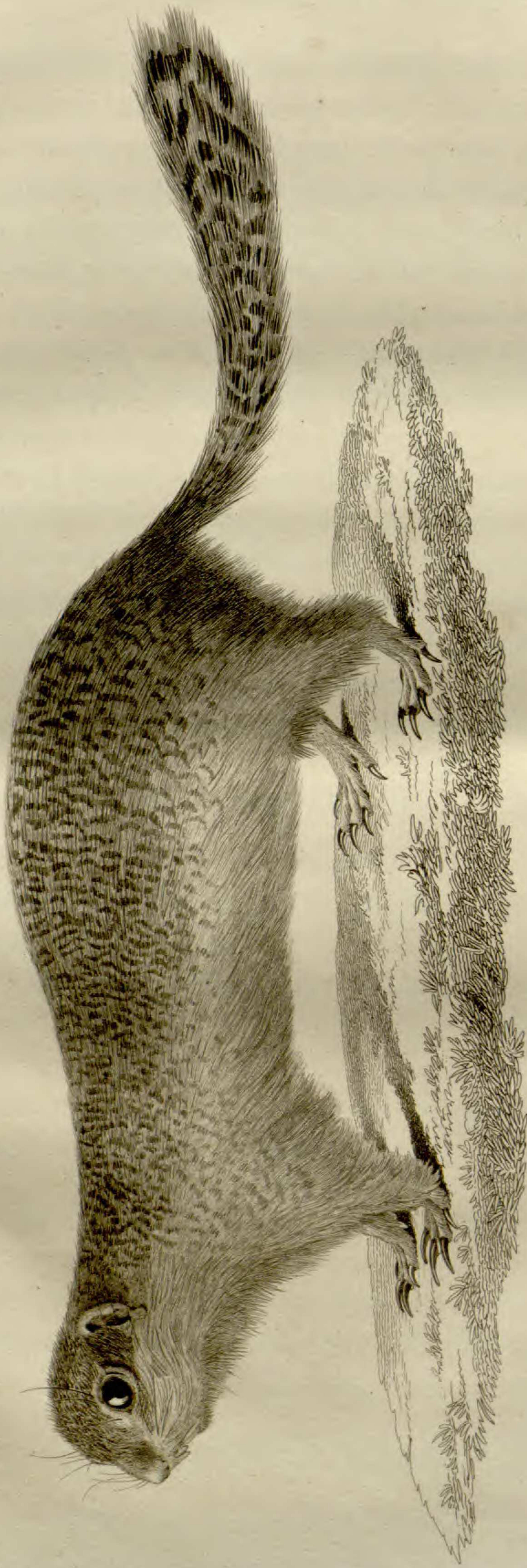
3. *A. capite auriculato; rostro pedibusque nigris, dorsi laterum et abdominis pilis duris, longis, basi cinereis medio nigris, apice albidis.* Gmel.

Hoary Marmot. *Penn. Hist. Quad.* ii. 398.—*edit.* 3. ii. 130.  
*Penn. Arct. Zool.* i. 112. *Schreb. Quad.* 745. *Shaw's Zool.* iii. 121.

*Arctomys pruinosa.* Gmel. *Syst. Nat.* i. 144. *Turton Syst. Nat.* i. 89.

Size of the Quebec Marmot, as described by Mr. Pennant; that is, the size of a Rabbit. *Tip* of the *nose* black; *ears* short and oval; *cheeks* whitish; *crown* dusky and tawny. *Hair* unusually rude and long; that on the back, sides and belly





*Arctomys Franklini.*  
reduced  $\frac{3}{4}$



belly cinereous at the root, black in the middle, whitish at the tip, so that the animal has a hoary appearance; *tail* black, mixed with rust colour. *Legs* black; *claws* dusky.

The above description is copied from the *History of Quadrupeds*. Our knowledge of this species is derived solely from the description of Pennant, which he made from a specimen in the Leverian Museum, and of which no figure was taken. The specimen was supposed to have come from the northern parts of North America. I have in vain endeavoured to trace the specimen; it was probably sold when the Leverian Museum was dispersed by sale, but I have not been able to ascertain by whom it was purchased.

The Quadruped\* which was described by Mr. Pennant under the name of Tail-less Marmot, and called *Arctomys Hudsonius* by Turton, has been considered by Dr. Shaw to belong to the genus *Hyrax*; it certainly is not an *Arctomys*. Nothing more is known of the animal than that the specimen of it described by Pennant and figured by Bewick was in the Leverian Museum.

ARCTOMYS FRANKLINII. GREY AMERICAN MARMOT.

A. capite auriculato, rostro obtusissimo, cauda elongata, corpore fuscescente vario.

TAB. XXVII.

Size of a large Rat; eleven inches from the nose to the insertion of the tail. *Face* broad, nearly covered with rigid grey (black and white) hairs; *nose* bare and very blunt; *ears*

\* Tail-less Marmot. *Penn. Hist. Quad.* ii. 405.—*edit.* 3. ii. 137. *Penn. Arct. Zool.* i.

112. *Bewick's Quad.* *edit.* 2. 374. *cum figura.*

*Arctomys Hudsonius.* *Turton Syst. Nat.* i. 90.

*Hyrax Hudsonius.* *Shaw's Zool.* ii. 225.

broad,



broad, covered with short hairs ; short black *whiskers* on the cheeks, and similar hairs grow thinly distributed above and below the eyes ; *throat* dusky white ; *upper fore-teeth* short and reddish-yellow ; *lower fore-teeth* twice the length of the upper, and paler. *Upper part of the body* with short hairs, dark at the base, in the middle dingy white, then first black, next yellowish-white, and tipped with black, the whole a variegated dark yellowish grey ; the hair on the *sides* is longer, has less black, and is without the yellow tinge ; that on the *belly* is dark at the base and dingy-white above ; *tail*, to the end of the hair, five inches long, with long hairs banded with black and white and tipped with white, the whole appearing indistinctly striped with black and white. *Feet* broadish ; *toes* thin and grey, covered with hairs, on the fore-feet the second from the inside longest, the outer shortest and placed far back ; the three centre hind-toes nearly of an equal length, the extremes shorter and far back ; the *claws* horn colour, those on the fore-feet long and sharp, those on the hind-toes shorter.

This specimen approaches the *A. pruinosa* in some parts of the description, but is still so distinct in others, that I cannot suppose it to be a different state or age of that animal, or even supposing imperfection or error to exist in the description of *A. pruinosa*, that the two can be ever brought together as one species.

The name is given in compliment to the intrepid and spirited Commander of the Expedition, to which, from his perseverance in the arduous enterprise intrusted to his conduct, so much of interest is attached.





*Arctomys Richardsoni.*

reduced  $\frac{5}{9}$



## ARCTOMYS RICHARDSONII. TAWNY AMERICAN MARMOT.

*A. auriculis brevibus, rostro acuto, cauda mediocri, corpore fulvescente.*

## TAB. XXVIII.

Nearly the size of the preceding but more slender. Top of the *head* covered with short hairs, dark at the base and light at the tips; *face* narrow; *nose* tapering and sharp, bare at the end, above covered with short light-brown hairs joining and mixing with those on the top of the head; *ears* oval and short; *cheeks* swollen, covered with light-brown hairs; *whiskers* short, growing from the cheeks, and a few long rigid hairs above the eyes; *throat* dirty white; the *fore-teeth* of the specimen were broken. Upper part of the *body* covered with soft short hairs, dark at the base, above fulvous; in the middle of the back the hairs are like those on the top of the head but lighter: sides with longer hairs, showing dark at their base when raised, the ends a smoky white, the under-parts similar, but a little dashed with ferruginous; *tail* three inches and a half long to the end of the hair, slender, and thinly covered with long hairs, which are at the base of the same colour as the body, but above of three distinct colours, first black, next dark, and lastly light at the upper extremity. *Legs* rather long and slender: *feet* narrow; *claws* horn-coloured, arched and sharp; on the fore-feet, withinside, a small toe, placed far back, with an obtuse claw; in having this it differs from the general character of the genus; outer toe and claw of the fore-feet much shorter than the remaining three, of which the middle one with its claw is longest. Of the *hind-toes*, the two extremes shorter and placed back, the other three nearly of the same length.